## **ABSTRACT**

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Methods and apparatus facilitating mobile node paging in a system where a mobile node is able to hand off application processing to an application proxy are described. Paging determinations are made based on application processing results corresponding to processing the content of multiple packet payloads. In some cases paging determinations are made based on processing the payload of a single packet in conjunction with information received from a mobile node, e.g., intermediate application processing results, mobile node state information, etc. To facilitate application processing handoffs in a manner that is transparent to a peer node involved in an ongoing communications session with the mobile node, security information may be passed between the mobile node and the application proxy node in a manner that is transparent to the peer node allowing an end to end security association to be maintained throughout the communications session with the peer node.